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EXAMINER	
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The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DEAN J. LARSON,
BABAK KADKHODAYAN,
DI WU, KENJI TAKESHITA,
BI-MING YEN, XINGCAI SU,
WILLIAM M. DENTY, JR., and
PETER LOEWENHARDT

Appeal 2008-4185
Application 10/685,739
Technology Center 1700

Decided: October 28, 2008

Before EDWARD C. KIMLIN, PETER F. KRATZ, and
JEFFREY T. SMITH, *Administrative Patent Judges*.

KIMLIN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1-20. Claims 1 and 9 are illustrative:

1. An apparatus for providing a gas from a gas supply to at least two different zones in a process chamber, comprising:

a flow divider for providing a fluid connection to the gas supply, wherein the flow driver splits gas flow from the gas supply into a plurality of legs;

a master leg in fluid connection with the flow divider, wherein the master leg comprises a master fixed orifice; and

a first slave leg in fluid connection with the flow divider and in parallel with the master leg, wherein the first slave leg comprises:

a first slave leg valve; and

a first slave leg fixed orifice.

9. The apparatus, as recited in claim 8, wherein the first, second, third, fourth, and fifth leg fixed orifices are flat plate fixed orifices.

The Examiner relies upon the following references in the rejection of the appealed claims:

Ohmi	5,313,982	May 24, 1994
Motoda	5,496,408	Mar. 5, 1996
Shinozuka	6,315,858 B1	Nov. 13, 2001

Appellants' claimed invention is directed to an apparatus for providing gas to at least two different zones in a process chamber. The apparatus comprises a flow divider connected to a gas supply which splits the gas flow into a plurality of legs including a master leg and at least one slave leg. The master leg comprises a fixed orifice. Claim 9 recites that the leg fixed orifices are flat plate fixed orifices.

Appealed claims 1-3, 17, 19, and 20 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Motoda. Claim 4-7, 9, 10, 12, and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Motoda in view of Shinozuka. Claims 8, 11, 13, 14, 17, and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Motoda in view of Shinozuka and Ohmi. In addition, claims 1-7, 9, 10, 12, 15, 17, 19, and 20 stand rejected under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as being unpatentable over Motoda in view of Shinozuka.

We have thoroughly reviewed each of Appellants' arguments for patentability, as well as the declaration evidence relied upon in support thereof. However, we are in complete agreement with the Examiner's reasoned analysis and application of the prior art, as well his cogent and thorough disposition of the arguments raised by Appellants. Accordingly, we will sustain the Examiner's rejections for the reasons set forth in the Answer, which we incorporate herein, and we add the following for emphasis only.

We consider first the § 102 rejection of claims 1-3, 17, 19, and 20 over Motoda. The sole issue on appeal regarding whether Motoda describes the claimed invention within the meaning of § 102 involves the interpretation of the claimed master leg comprising a "fixed orifice." Appellants submit the following argument:

> Those of ordinary skill in the art recognize that the term "fixed orifice" in the context of the patent application means "a fixed flat plate body, containing a precision fixed geometry." Evidence of this difference is provided in the declaration Dean Larson, which is of

> record in the patent file" (Br. of January 22, 2007, page 6, second para.).

It is Appellants' contention that such a definition for "fixed orifice" is "what one of ordinary skill in the art would understand the term to mean after having reviewed the specification." (*Id.*, third para.). Dean Larson, the Declarant and one of the present inventors, states "[i]n my area of work the phrase, "fixed orifice" is a term of art referring to a fixed flat plate body, containing a precision fixed geometry aperture, mounted within a tubing system" (Decl. 2, second para.).

The Examiner maintains that master leg connecting 43a and 44 in Motoda's Figure 7 comprises a master fixed orifice since all pipes necessarily have a fixed orifice. The Examiner explains that one of ordinary skill in the art would not accord the language "fixed orifice" anything other than its ordinary English definition because Appellants' Specification lacks any teaching that the claim language means anything other than its simple English definition. The Examiner points out that Appellants' Specification does not suggest any other more restrictive definition for "fixed orifice" and, indeed, the term "orifice" is used interchangeably with "fixed orifice."

Our review of Appellants' Specification fails to find any particular definition of the claim language "fixed orifice" that would impart any particular meaning to the term other than its ordinary, dictionary definition. While the Specification discloses a fixed flat plate body as an **example** of a fixed orifice, the Specification provides no indication that the claim language is so limited to a particular type of fixed orifice. Indeed, claim 9 on appeal, which is ultimately dependent on claim 1 which recites "fixed orifice," states that the "fixed orifices are flat plate fixed orifices." This more narrow definition in a dependent claim indicates that the scope of independent claim 1 contemplated by Appellants embraces fixed orifices other than flat plate fixed orifices.

Furthermore, we concur with the Examiner that the Larson Declaration fails to establish on this record that one of ordinary skill in the extensive art of apparatus for providing gas to a process chamber would interpret the claimed master fixed orifice as limited to a fixed flat plate body containing a precision fixed geometry aperture mounted within a tubing system, as stated in the declaration. As noted by the Examiner, the Declarant's "my area of work" is not defined in the declaration, and it must be borne in mind that apparatus within the scope of the appealed claims embrace an extensive variety of technological arts. The appealed claims broadly encompass all apparatus which supply gas to any of a myriad of process chambers. As a result, we agree with the Examiner that Appellants have not established that one of ordinary skill in the art would **not** understand the claimed apparatus for providing gas to a process chamber as comprising a pipe as a master fixed orifice.

Turning to the § 103 rejection of claims 4-7, 9, 10, 12, and 15 over Motoda in view of Shinozuka, Appellants do not dispute the Examiner's legal conclusion that it would have been obvious for one of ordinary skill in the art to use the flat plate fixed orifice of Shinozuka in the system of Motoda. Rather, it is Appellants' contention that the iris valve of Shinozuka is variable, and not a fixed orifice. Appellants maintain that even though the Examiner is correct in stating that the iris valve of Shinozuka, once adjusted to a fixed position, exhibits the same structure and function as a flat plate fixed orifice, Appellants submit that "[m]erely because a variable orifice can be placed in one position for a long time, it does not change the orifice into a fixed orifice" (Br. of January 22, 2007, page 11, second para.). However, notwithstanding Appellants' argument, we find no error in the Examiner's rationale that when the claim language is given its broadest reasonable interpretation, a flat plate fixed orifice includes an iris valve which is adjusted to a fixed position. Manifestly, simply because an element of apparatus is adjustable in its position does not mean that it is not fixed in any one of its many positions. The Larson Declaration does not establish that one of ordinary skill in the art would not interpret the claimed flat plate fixed orifice as encompassing the adjustable iris valve of Shinozuka that may be fixed in one position to define a fixed orifice.

Appellants do not present a separate substantive argument for the § 103 rejection of claims 8, 11, 13, 14, 17, and 18 over Motoda in view of Shinozuka and Ohmi. Nor have Appellants presented a separate substantive argument against the § 102/§103 rejection of claims 1-7, 9, 10, 12, 15, 17, 19, and 20 over Motoda alone or in view of Shinozuka.

As a final point, with respect to the § 103 rejections, we note that Appellants base no argument upon objective evidence of nonobviousness, such as unexpected results.

In conclusion, based on the foregoing and the reasons well stated by the Examiner, the Examiner's decision rejecting the appealed claims is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv)(effective Sept. 13, 2004).

AFFIRMED

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